DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention about an information providing device and a method, information processor ******, and a medium, The server which provides service on a network especially, for example, When [with good access information of IP (Internet Protocol) address for accessing it, etc.] strange, the server is accessed easily, It is related with the information providing device which enables it to receive offer of service and a method, information processor ******, and a medium.

[0002]

[Description of the Prior Art]PPP (Point-to-Point Protocol) connection of the information processors, such as a personal computer or PDA (Personal Digital Assistant), can be made via communication lines, such as a general telephone line, at a network.

[0003]The personal computer by which PPP connection was carried out, When connected, IP (Internet Protocol) address is attached by PPP and predetermined

service can be received from a predetermined WEB server or a predetermined chat server via a network based on the IP address. A WEB server or a chat server is always connected to a network, an IP address is fixed, and specific URL (Uniform Resource Locator) is attached.

[0004]

[Problem(s) to be Solved by the Invention]When PPP connection is carried out, the IP address given to a personal computer by PPP is not the same in each time. Therefore, other personal computers connected to the network are difficult to specify the personal computer by which PPP connection was carried out by URL.

[0005]Therefore, the personal computer by which PPP connection was carried out cannot provide service for other personal computers as a WEB server or a chat server.

[0006]This invention is made in view of such a situation, and information processors, such as a personal computer by which PPP connection was carried out, aim at enabling it to provide service as a WEB server, a chat server, etc. in other personal computers.

[0007]

[Means for Solving the Problem]Written this invention is characterized by a thing as which access information specifies a variable service provision system and for which the following was comprised without accumulating and being alike at claim 1.

A memory measure which matches with specific information and memorizes access information of the service provision system.

A means of communication which transmits access information which receives specific information of a service provision system from an information processor on a network, and is matched with the specific information to an information processor.

[0008]Written this invention is characterized by a thing as which access information specifies a variable service provision system and for which the following was comprised without accumulating and being alike at claim 5.

A memory step which matches with specific information and memorizes access information of the service provision system.

A communication step which transmits access information which receives specific information of a service provision system from an information processor

on a network, and is matched with the specific information to an information processor.

[0009]Since written this invention specifies a service provision system variable in access information as claim 6, ** is characterized by a program which an information providing device is made to execute comprising the following.

A memory step which matches with specific information and memorizes access information of the service provision system.

A communication step which transmits access information which receives specific information of a service provision system from an information processor on a network, and is matched with the specific information to an information processor.

[0010]Written this invention is characterized by a thing which access a service provision system and for which the following was comprised without accumulating and being alike at claim 7.

By matching access information with specific information for specifying the service provision system, memorizing it, and transmitting specific information of

a service provision system with access information strange good to an information providing device which provides access information, An acquisition means which acquires access information matched with the specific information. A request means which accesses a service provision system and requires offer of service based on access information acquired from an information providing device.

[0011]Written this invention is characterized by a thing which access a service provision system and for which the following was comprised without accumulating and being alike at claim 10.

By matching access information with specific information for specifying the service provision system, memorizing it, and transmitting specific information of a service provision system with access information strange good to an information providing device which provides access information, An acquisition step which acquires access information matched with the specific information.

A request step which accesses a service provision system and requires offer of service based on access information acquired from an information providing device.

[0012]Written this invention is characterized by a program which ** performs to an information processor comprising the following at claim 11, in order to access a service provision system.

By matching access information with specific information for specifying the service provision system, memorizing it, and transmitting specific information of a service provision system with access information strange good to an information providing device which provides access information, An acquisition step which acquires access information matched with the specific information. A request step which accesses a service provision system and requires offer of service based on access information acquired from an information providing device.

[0013]In the information providing device according to claim 1, the information service method according to claim 5, and the medium according to claim 6, It matches with specific information for access information to specify a variable service provision system, While access information of the service provision system is memorized, specific information of a service provision system is

received from an information processor on a network, and access information matched with the specific information is transmitted to an information processor.

[0014]In the information processor according to claim 7, the information processing method according to claim 10, and the medium according to claim 11, As opposed to an information providing device which matches access information for accessing a service provision system with specific information for specifying the service provision system, memorizes it, and provides access information, By transmitting specific information of a service provision system with access information strange good, based on access information which access information matched with the specific information was acquired, and was acquired from the information providing device, it is accessed by service provision system and offer of service is required.

[0015]

[Embodiment of the Invention]Drawing 1 is a figure showing the composition of the 1 embodiment of the private chat system concerning this invention.

[0016]It comprises a personal computer and the private servers 1 are the client computer 3-1 and 3-2 (hereafter, suitably, when it is not necessary to distinguish both in particular), for example. It functions as a chat server etc. which provide a

chat and other services for describing it as the client computer 3, for example.

When serving a chat, the private server 1 by operation of the administrator (user)

of the private server 1. Via the predetermined communication line, PPP

connection is carried out to the networks 4, such as the Internet, therefore the

private server 1 is not always connected to the network 4. When it connects with

the network 4 to the private server 1, Whenever the IP address for accessing the

private server 1 is assigned, therefore it connects the IP address of the private

server 1 to the network 4, it has variable (a different thing) from the provider who

does not illustrate.

[0017]The location server 2 is matched with the location number which is the

specific information for specifying the private server 1, The status (information)

which shows an IP address when PPP connection of the private server 1 is

carried out, and that of whether the private server 1 is connected to the network

4 is memorized in a predetermined database.Namely, when the private server 1

is connected to the network 4 as for the location server 2, Or before being

separated from the network 4, predetermined data is received from the private

server 1, and the IP address and status are matched with the location number of

the private server 1, and are recorded on a database (memory).

[0018]The location server 2 receives the location number transmitted from the client computer 3 via the network 4, The IP address (matched) and status corresponding to the location number which received are transmitted to the client computer 32.

[0019]The client computer 3 comprises a personal computer, for example like the private server 1. And when the client computer 3 requires offer of service to the private server 1, Via the network 4, a location number peculiar to the private server 1 is transmitted to the location server 2, and this receives the IP address and status of the private server 1 from the location server 2 (acquisition). The client computer 3 requires offer of service to the private server 1 based on the IP address received from the location server 2. For example, PPP connection also of the client computer 3 is carried out to the network 4 like the private server 1.

[0020]Next, drawing 2 shows the private server 1 of drawing 1, and the example of composition of the client computer 3. As mentioned above, the private server 1 and the client computer 3 are constituted from a personal computer by each, therefore serve as an identical configuration here.

[0021]CPU(central processing unit) 11 actually performs various application programs and fundamental OS (operating system), and, thereby, performs

various kinds of processings which are mentioned later. Generally,

ROM(read-only memory) 12 stores fixed data fundamentally of the parameters

the program which CPU11 uses, and for an operation. RAM(random-access

memory) 13 stores required data etc. on the program which CPU11 executes,

and its processing. These are mutually connected by bus 14.

[0022]The keyboard 16 is operated by the user when inputting various kinds of

instructions into CPU11. The mouse 17 is operated by the user when performing

the directions and selection of the point on the screen of CRT(cathode ray tube)

18. CRT18 displays a variety of information in a text or an image. HDD (hard disk

drive)19 and FDD (floppy disk drive)20, A hard disk or a floppy (registered

trademark) disk (neither is illustrated) is driven, respectively, and a program,

data, etc. which are performed by CPU11 to them are recorded or reproduced.

The communication board 12 is a device for connecting with the network 4, and

specifically comprises an Ethernet (registered trademark) (Ethernet (registered

trademark)) board, a modem, a terminal adopter, etc.

[0023]These keyboards 16 thru/or communication boards 21 is connected to the

interface 15, and the interface 15 is connected to CPU11 via the bus 14.

[0024]Drawing 3 shows the example of composition of the location server 2 of

drawing 1.

[0025]As shown in the figure, the location server 2 comprises the CPU31

[respectively same] thru/or communication board 41 as CPU11 thru/or the

communication board 21 which constitutes the private server 1 and the client

computer 3 of drawing 2.

[0026]Drawing 4 is a figure showing the location navigator window displayed on

the screen of the client computer 3, when the client computer 3 transmits a

location number to the location server 2.

[0027]The location navigator window comprises the location number input field

51 and button 52 grade, The location number peculiar to the private server 1

which requires offer of service of the location number input field 51. (For

example, "5448xxxx" etc.) are inputted, and if the button 52 to which "O.K." and

a name were given is clicked, in the client computer 3, the location number

inputted into the location server 2 will be transmitted.

[0028]When the private server 1 with which the location server 2 is specified by

the location number from the client computer 3 is connected to the network 4,

The data of the IP address currently assigned to the private server 1 and the

status which shows that the private server 1 is connected to the network 4 is

transmitted to the client computer 3.

[0029]When the private server 1 with which the location server 2 is specified by the location number from the client computer 3 is not connected to the network 4, The data of status in which it is shown that the private server 1 is not connected to the network 4 is transmitted to the client computer 3.

[0030]Next, drawing 5 shows the window (according to this embodiment, the window of the WEB browser is displayed) displayed on the screen of the client computer 3, when the client computer 3 connects with the private server 1 and starts a chat.

[0031]The client computer 3 The IP address of the location server 2 to the private server 1, And when the status (suitably henceforth connection status) which shows that the private server 1 is connected to the network 4 is received, it connects with the private server 1 based on the IP address. In the client computer 3, a WEB browser as shown in drawing 5 is started, Based on the IP address from the location server 2, the homepage as a HTML (Hyper Text Markup Language) file for performing a chat is required, and this will be in the state which can perform a chat.

[0032]Next, drawing 6 shows the dialog displayed on the screen of the client

computer 3, when the private server 1 is not connected to the network 4.

[0033]When the private server 1 specified by the location number which the client computer 3 transmitted to the location server 2 is not connected to the network 4, The status the location server 2 indicates it to be that the private server 1 is not connected to the network 4. Transmit (it is hereafter called unconnected status suitably) to the client computer 3, and in this case in the client computer 3. Access to the private server 1 is not performed, but the dialog the message "it does not have the present on-line" of the purport that the private server 1 as shown in drawing 4 is not further connected to the network 4 was indicated to be is displayed.

[0034]Next, processing of the location server 2 is explained with reference to the flow chart of drawing 7.

[0035]In the location server 2, if there is a demand of access from the client computer 3 or the private server 1, in Step S11, communication with the client computer 3 or the private server 1 will be performed via the network 4. And in Step S12, the location server 2 judges whether the request for performing a certain demand was received from the client computer 3 or the private server 1.

[0036]In Step S12, when judged with not having received the request from the

client computer 3 or the private server 1, it progresses to Step S18.

[0037]In Step S12, when judged with having received the request from the client computer 3 or the private server 1, it progresses to Step S13 and it is judged whether the request is the demand of the information registration from the private server 1.

[0038]In Step S13, when judged with there being a request of information registration from the private server 1, it progresses to Step S14 and it is judged [whether the location number for specifying the private server 1 is already registered, and] how it is (does it memorize?).

[0039]namely, the case where the location number for the private server 1 to specify it is already assigned by the location server 2 -- the request of information registration -- both, the request of information registration of such [in Step S14] a location number that transmits the location number to the location server 2 -- it is judged whether it has both been transmitted.

[0040]In Step S14, when judged with the location number of the private server 1 not being registered, it progresses to Step S15, and the location server 2 determines a unique location number, and publishes it to the private server 1. That is, the location server 2 determines the unique location number assigned to

the private server 1, transmits to the private server 1, and progresses to Step S16.

[0041]When judged with the location number of the private server 1 being registered in Step S14, That is, from the private server 1, when the location number has been transmitted, the request of information registration skips Step S15, and progresses to Step S16.

[0042]In Step S16, according to the request of information registration from the private server 1, the location server 2 registers information and progresses to Step S17.

[0043][namely, / immediately after connecting the private server 1 to the network 4], The IP address assigned when it connected with the network 4 with the request of information registration also transmits to the location server 2. In this case, in Step S16, that IP address matches with the location number of the private server 1, and is registered. In this case, at Step S16, it matches with the location number of the private server 1, and connection status (information showing the private server 1 being connected to the network 4) is also registered.

[0044][just before cutting the private server 1 from the network 4], The purport that it cuts from the network 4 with the request of information registration also

transmits to the location server 2, and the IP address matched with the location number of the private server 1 is deleted at Step S16 in this case. In this case, at Step S16, it changes to the connection status matched with the location number of the private server 1, and unconnected status (information showing the private server 1 not being connected to the network 4) is also registered.

[0045]In Step S17, the location server 2 transmits the notice (suitably henceforth a processing terminating notice) of the purport that registration of information was completed to the private server 1, and progresses to Step S18.

[0046]On the other hand, when it is judged with there being no request of information registration from the private server 1 in Step S13, progress to Step S19 and the location server 2, It is judged whether a request is the demand (inquiry request) of the inquiry which asks the information about the private server 1 from the client computer 3. In Step S19, when judged with there being an inquiry request from the client computer 3, it progresses to Step S20 and the information about the private server 1 is retrieved from a database.

[0047]Namely, the client computer 3 receives the location server 2, The location number of the private server 1 is transmitted with an inquiry request, and the IP address and status which match with the location number and are memorized by

the database are searched with Step S20. Therefore, when the location number transmitted with the inquiry request is a thing of the private server 1, the IP address and status of the private server 1 are searched with Step S20.

[0048]And it progresses to Step S21, and to the client computer 3, for example, the location server 2 was searched with Step S20, the IP address of the private server 1 and status are transmitted, and it progresses to Step S18. Since it mentioned above and the IP address of the private server 1 is not registered into the location server 2 when the private server 1 has not connected with the network 4, an IP address is not transmitted in this case.

[0049]On the other hand, in Step S19, when judged with there being no request of an inquiry from the client computer 3, Step S20 and Step S21 are skipped, and it progresses to Step S18.

[0050]In Step S18, when it judges whether processing is ended or not and judged with not ending processing, the location server 2 returns to Step S11, and repeats the same processing hereafter. In Step S18, when judged with ending processing, the location server 2 ends processing.

[0051]As mentioned above, it corresponds to the request from the private server 1 with which an IP address changes in the location server 2 whenever it

connects with the network 4, The status which shows whether it is connected to the IP address and the network 4 of the private server 1 is recorded on a database (memory), and it corresponds to the request from the client computer 3, The IP address and status of the private server 1 which are recorded on the database are transmitted to the client computer 3. Therefore, the client computer 3 is accessing the location server 2, if the location number of the private server 1 is recognized, An IP address of the private server 1 which is different whenever it connects with the network 4 is acquired, and it becomes possible to receive further the service which the private server 1 provides.

[0052]Next, with reference to the flow chart of drawing 8, processing (information registry request processing) of the private server 1 is explained.

[0053]When an IP address is acquired from the provider who connects the private server 1 to the network 4, and does not illustrate, and when cutting connection with the network 4, processing (information registry request processing) according to the flow chart of drawing 8 is performed.

[0054]That is, in the private server 1, in Step S31, via the network 4, access is performed to the location server 2, it progresses to Step S32, and the request of information registration is performed.

[0055]That is, the private server 1 transmits the IP address assigned when it connected with the network 4 with the request of information registration to the location server 2, when it connects with the network 4 and an IP address is acquired. The private server 1 transmits cutting from the network 4 with the request of information registration to the location server 2, when cutting connection with the network 4. Thereby, in the location server 2, as drawing 7 explained, the information about the private server 1 is registered.

[0056]And it progresses to Step S33, and when it is judged [not having been judged and transmitted and] whether the processing terminating notice has been transmitted from the location server 2, it progresses to Step S34.

[0057]In Step S34, it is judged whether the location number has been transmitted from the location server 2.

[0058]namely, -- setting the private server 1 to Step S32, when the location number for specifying it is already assigned by the location server 2 -- the request of information registration -- both, Although the location number is transmitted to the location server 2, a location number is not transmitted when the location number is not assigned. And in this case the location server 2, As drawing 7 explained, it is judged whether to the private server 1, the unique

location number was assigned, it transmitted, and the location number has been transmitted from the location server 2 as mentioned above in Step S34.

[0059]In Step S34, when judged [that a location number has not been transmitted and], Step S35 is skipped and it returns to Step S33.

[0060]In Step S34, when judged with the location number having been transmitted, it progresses to Step S35, and with the private server 1, the location number is received and memorized and returns to Step S33. Here, when a location number is memorized as mentioned above, in subsequent information registry request processings, the location number is transmitted to the location server 2 with the request of information registration.

[0061]On the other hand, in Step S33, when judged with the processing terminating notice having been transmitted from the location server 2, connection with the location server 2 is cut and information registry request processing is ended.

[0062]In the location server 2 when the private server 1 connects with the network 4, by performing the above information registry request processings, As drawing 7 explained, it is memorized by the location number of the private server 1, and the IP address currently assigned to it, and as a result, the client

computer 3, If the location number of the private server 1 is recognized as mentioned above, by accessing the location server 2. An IP address of the private server 1 which is different whenever it connects with the network 4 is acquired, and it becomes possible to receive further the service which the private server 1 provides.

[0063]After connection with the network 4 is made and information registry request processing is performed in the private server 1, it is executed by the program for functioning as a chat server, and by this, It will be in the state which can provide service of a chat to the client computer 3.

[0064]Next, processing of the client computer 3 is explained with reference to the flow chart of drawing 9.

[0065]The client computer 3 as well as the private server 1 acquires an IP address from the provider who does not illustrate, for example, When it connected with the network 4, for example, does in this way and is connected with the network 4, processing according to the flow chart of drawing 9 is performed.

[0066]That is, with the client computer 3, the location navigator window shown in drawing 4 is displayed in this case. And in Step S41, when judged with it not

being judged and inputted whether the location number was inputted into the location number input field 51 by the user, it returns to Step S41.

[0067]In Step S41, to the location number input field 51. When judged with the location number having been inputted, the user of the client computer 3, The location number of private server 1 which wants to receive offer of service in the location number input field 51, and other servers is inputted, When the button 52 to which "O.K." and the name of the location navigator window (drawing 4) were given is clicked, progress to Step S42 and the client computer 3, The location server 2 is accessed and the location number inputted into the location number input field 51 is transmitted with an inquiry request.

[0068]In this case, since the information matched with the location number transmitted with the inquiry request is transmitted in the location server 2 as drawing 7 explained, Namely, when the location number transmitted with the inquiry request is assigned to the private server 1 for example. Since the location server 2 transmits the information (it mentioned above like an IP address and status) about the private server 1, in the client computer 3. In Step S43, it is judged whether it was made such and information has been transmitted from the location server 2.

[0069]In Step S43, when judged [that information has not been transmitted from the location server 2, and], it progresses to Step S47.

[0070]In Step S43, when judged with information having been transmitted from the location server 2, the client computer 3 receives the information (acquisition), and progresses to Step S44. In Step S44, the client computer 3, Based on the status contained in the information received from the location server 2, Whether the private server 1 corresponding to the location number inputted into the location number input field 51 operating and the private server 1 are connected to the network 4, and it is judged whether it is in the state which can provide service of a chat etc.

[0071]In Step S44, when judged with the private server 1 operating, it progresses to Step S45 and the client computer 3 changes into URL the IP address of the private server 1 contained in the information received from the location server 2. That is, the client computer 3 obtains URL for receiving the service which the private server 1 provides by adding the IP address of the private server 1 to predetermined protocol names (http:// etc.), and, for example, adding a slash (/) etc. to them after it.

[0072]And progress to Step S46 and the client computer 3, For example, as

shown in drawing 5, a WEB browser is started, further, based on URL obtained at Step S45, by accessing the private server 1, offer of services, such as a chat, is required and communication with the location server 2 is ended after that. Namely, thereby, the client computer 3 will be in the state which can receive service of the chat etc. which the private server 1 provides.

[0073]On the other hand, when judged with the private server 1 not operating in Step S44, progress to Step S48 and the client computer 3, The dialog of the warning which shows that the private server 1 as shown in drawing 6 is not connected to the network 4 is displayed, and communication with the location server 2 is ended. That is, since the private server 1 is not connected to the network 4 in this case, the client computer 3 cannot receive the service which the private server 1 provides.

[0074]In Step S47, when judged with judging whether communications processing with the location server 2 is ended, and not ending, the client computer 3 returns to Step S41, and repeats the same processing hereafter.

[0075]In Step S47, when judged with ending communication, the client computer 3 ends communications processing with the location server 2.

[0076]As mentioned above, the client computer 3, Based on the location number

of the private server 1, from the location server 2. Since offer of service is required when an IP address acquires the IP address assigned to the variable private server 1 now and accesses the private server 1 based on the IP address, The service which the private server 1 variable in an IP address provides can be received easily.

[0077]Therefore, the private server 1 which provides various kinds of services, Even if constituted from the client computer 3 which is a computer of an end user to which an IP address is assigned by the provider, other users, The IP address is acquired and it becomes possible like the case where an IP address accesses a fixed server to receive offer of predetermined service. As a result, the client computer 3 is used for an end user as the private server 1, For example, so to speak, the thing which provide service of the chat server which provides the environment of a chat, the WEB server which provides a homepage, the multiuser server which provides the environment of the versus fighting game through the network 4, and other various kinds and for which a personal server is managed easily becomes possible.

[0078]For example, one of the groups who comprise several users works his own personal computer as the private server 1, The personal computer is

connected to the network 4, and if the user who constitutes the group is notified

of a location number, the personal computer will become possible [providing

service of a chat for the user who constitutes the group]. Namely, even if a user

does not access the chat server with which the fixed IP address is assigned in

this case, it is associates and a chat can be performed by making that

associate's personal computer into a chat server. As a result, load will be

distributed if it carries out from the chat server with which the fixed IP address is

assigned.

[0079]in the location server 2, whether the personal computer which provides

service as the private server 1 being connected to the network 4, a user's access

number to such a personal computer, etc. can be recognized easily.

[0080]Next, the medium used in order to install in a computer the program which

performs a series of processings mentioned above and to change it into the

state which can be performed by computer with reference to drawing 10 is

explained.

[0081]a program is shown in drawing 10 (A) -- as -- the personal computer 101

(the private server 1.) It can provide for a user in the state where it installed on

the hard disk 102 as a recording medium built in corresponding to the location

server 2 and the client computer 3 beforehand.

[0082]Or as shown in drawing 10 (B), again a program to recording media, such as the floppy disk 111, CD-ROM112, MO disk 113, DVD114, the magnetic disk 115, and the semiconductor memory 116. It can store temporarily or permanently and can provide as a software package.

[0083]Via [as a program is shown in drawing 10 (C)] the artificial satellite 122 for the digital satellite broadcasting from the download site 121, Transmit to the personal computer 123 (it corresponds to the private server 1, the location server 2, and the client computer 3) on radio, or, It transmits to the personal computer 123 with a cable, and can be made to store in the hard disk etc. to build in in the personal computer 123 via a Local Area Network and a network 131 called the Internet.

[0084]The medium in this specification means the concept of a broad sense containing all these media.

[0085]It is not necessary to necessarily process the step which describes the program provided by a medium to a time series in accordance with the order indicated as a flow chart, and it also includes a parallel target or the processing performed individually in this specification.

[0086]In this specification, a system expresses the whole device constituted by two or more devices.

[0087]

[Effect of the Invention]According to the information providing device according to claim 1, the information service method according to claim 5, and the medium according to claim 6. It matches with specific information for access information to specify a variable service provision system, While the access information of the service provision system is memorized, the specific information of a service provision system is received from the information processor on a network, and the access information matched with the specific information is transmitted to an information processor. Therefore, in an information processor, access information is enabled to access a variable service provision system easily, and access information becomes easily possible [providing service] to an information processor with a strange good service provision system further.

[0088]According to the information processor according to claim 7, the information processing method according to claim 10, and the medium according to claim 11. As opposed to the information providing device which matches the access information for accessing a service provision system with

the specific information for specifying the service provision system, memorizes it, and provides access information, By transmitting the specific information of a service provision system with access information strange good, based on the access information which the access information matched with the specific information was acquired, and was acquired from the information providing device, it is accessed by the service provision system and offer of service is required. Therefore, in an information processor, it becomes possible to receive easily the service which a service provision system with access information strange good provides, and access information becomes easily possible [providing service] to an information processor with a strange good service provision system further.

[Translation done.]